

AF Solution Stoichiometry

1. How many moles of water form when 25.0 ml of 0.100 M nitric acid solution reacts with an excess of NaOH?

2. In the last lab, 10.0 ml of 3.00 M hydrochloric acid reacted with an excess of zinc. What is the maximum volume of hydrogen that can be collected via water displacement at 22.0°C and 745 torr? (Ignore water vapor pressure)

3. A volume of 1.23L of hydrogen iodide gas is bubbled through 200. mL of 0.100 M solution of aluminum chloride. What volume of hydrogen chloride gas will be produced if the reaction takes place at STP? (Ignore water vapor pressure)

4. If an excess of aluminum metal is dropped into a 1.20 L of 0.400 M copper (II) sulfate, what mass of copper metal will form? If only 15.2 g of copper form, what is the percent yield?